

Serial No. 10/620,732
Response and Amendment A, dated January 5, 2005
Reply to Office Action, dated October 5, 2004

This listing of claims replaces all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS

1. (currently amended) A method for representing lanes with a road database comprising:
storing in the road database data representations of physical road lanes; and
associating with each data representation of a physical road lane
data indicating start and end points of the represented physical road lane;
and
data indicating what linearly extending physical features are adjacent to
and extend along the represented physical road lane on a right side and a left side
thereof.
2. (currently amended) The method of Claim 1 wherein the data indicating what linearly extending physical features are adjacent to and extend along the represented physical road lane indicate that another physical road lane is located adjacent to the represented road lane on a specified side thereof and that said another physical road lane [[, which]] can be entered by a lane change from said represented physical road lane.
3. (currently amended) The method of Claim 1 wherein the data indicating what linearly extending physical features are adjacent to and extend along the represented physical road lane indicate that another physical road lane is located adjacent to the represented road lane on a specified side thereof and that said another physical road lane [[but which]] cannot be entered by a lane change from said represented physical road lane.

Serial No. 10/620,732
Response and Amendment A, dated January 5, 2005
Reply to Office Action, dated October 5, 2004

4. (currently amended) The method of Claim 1 wherein the data indicating what linearly extending physical features are adjacent to and extend along the represented physical road lane indicate that a physical road lane of less than full width is present on a specified side thereof, wherein said physical road lane of less than full width becomes a physical road lane of full width immediately ahead in a direction of travel of the physical road lane is in the process of forming.

5. (currently amended) The method of Claim 1 wherein the data indicating what linearly extending physical features are adjacent to and extend along the represented physical road lane indicate a physical road lane of less than full width is present on a specified side thereof, wherein said physical road lane of less than full width ends entirely immediately ahead in a direction of travel of the physical road lane is in the process of ending.

6. (currently amended) The method of Claim 1 wherein the data indicating what linearly extending physical features are adjacent to and extend along the represented physical road lane indicate that a shoulder is located adjacent to the represented road lane on a specified side thereof.

7. (currently amended) The method of Claim 1 wherein the data indicating what linearly extending physical features are adjacent to and extend along the represented physical road lane indicate that another drivable surface is located adjacent to the represented road lane on a specified side thereof.

8. (currently amended) The method of Claim 1 wherein the data indicating what linearly extending physical features are adjacent to and extend along the represented physical road lane indicate that no drivable surface is located adjacent to the represented road lane on a specified side thereof.

Serial No. 10/620,732
Response and Amendment A, dated January 5, 2005
Reply to Office Action, dated October 5, 2004

9. (original) The method of Claim 1 further comprising:
associating with at least some data representations of physical road lanes data
indicating a sublane of the represented physical road lane,
wherein the data indicating a sublane include data indicating start and end points
of the represented sublane, wherein the data indicating start and end points of the
represented sublane are defined relative to an end of the physical road lane of which the
sublane is a part.

10. (original) The method of Claim 1 further comprising:
associating with some data representations of a physical road lane data indicating
multiple sublanes of the represented physical road lane,
wherein each of the multiple sublanes is represented by data indicating start and
end points of the respective associated represented sublane, wherein the data indicating
start and end points of the represented sublane are defined relative to an end of the
respective associated physical road lane of which the sublane is a part.

11. (original) The method of Claim 10 wherein at least some of the
sublanes associated with some physical road lanes overlap.

12. (original) The method of Claim 1 further comprising:
associating with each data representation of a physical road lane data indicating a
geometry of the represented physical road lane.

13. (currently amended) The method of Claim 12 wherein the geometry of a
represented physical road lane [includes] is represented using a clothoid.

14. (currently amended) The method of Claim 12 wherein the geometry of a
represented physical road lane [includes] is represented using a spline.

Serial No. 10/620,732
Response and Amendment A, dated January 5, 2005
Reply to Office Action, dated October 5, 2004

15. (original) The method of Claim 1 wherein each data representation of a physical road lane further comprises:
a reference to at least one data entity used for navigation-related purposes that represents the road segment of which the physical road lane is a part.

16. (currently amended) The method of Claim 1 wherein the data representations of physical road lanes represent lanes that are less than full width as well as lanes of full width.

17. (original) A method for representing lanes with a road database comprising:
storing in the road database data representations of physical road lanes;
associating with each data representation of a physical road lane data indicating start and end points of the represented physical road lane; and
associating with at least some data representations of physical road lanes data indicating a sublane of the represented physical road lane,
wherein the data indicating a sublane include data indicating start and end points of the represented sublane, wherein the data indicating start and end points of the represented sublane are defined relative to an end of the physical road lane of which the sublane is a part.

18. (original) The method of Claim 17 wherein the data indicating a sublane include attributes that take precedence over the same attributes of the represented physical road lane of which the sublane is a part.

19. (original) The method of Claim 17 wherein some of the data representations of physical road lanes have multiple data representations of sublanes associated with a single physical road lane.

Serial No. 10/620,732
Response and Amendment A, dated January 5, 2005
Reply to Office Action, dated October 5, 2004

20. (original) The method of Claim 19 wherein some of the multiple sublanes associated with a single physical road lane overlap.

21. (original) The method of Claim 17 wherein the data representations of physical road lanes represent lanes that are less than full width.

22. (currently amended) A database that models roads comprising:
data representations of physical road lanes, wherein each data representation of a physical road lane includes
data indicating start and end points of the represented physical road lane; and
data indicating what linearly extending physical features are adjacent to and extend along the represented physical road lane on a right side and a left side thereof.

23. (original) The database of Claim 22 further comprising:
data entities that represent roads for navigation-related purposes,
wherein the data representations of physical road lanes refer to those data entities that represent roads for navigation-related purposes that represent those roads of which the physical road lanes are a part.

24. (original) The database of Claim 22 wherein said data representations of physical road lanes are stored on a computer-readable medium.

25. (currently amended) The database of Claim 22 wherein the data representations of physical road lanes represent lanes that are less than full width as well as lanes of full width.

Serial No. 10/620,732
Response and Amendment A, dated January 5, 2005
Reply to Office Action, dated October 5, 2004

26. (original) A database that models roads comprising:
data representations of physical road lanes, wherein each data representation of a physical road lane includes
data indicating start and end points of the represented physical road lane; and
wherein at least some of the data representations of physical road lanes include
data indicating a sublane of the represented physical road lane,
wherein the data indicating a sublane include data indicating start and end points of the represented sublane, wherein the data indicating start and end points of the represented sublane are defined relative to an end of the physical road lane of which the sublane is a part.

27. (original) The database of Claim 26 wherein said data representations of physical road lanes are stored on a computer-readable medium.

28. (original) The database of Claim 26 wherein the data representations of physical road lanes represent lanes that are less than full width.